



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,535	08/09/2001	Charles A. Shaffer	05272.00002	1980
22907	7590	10/04/2004	EXAMINER	
BANNER & WITCOFF 1001 G STREET N W SUITE 1100 WASHINGTON, DC 20001			FISCHER, JUSTIN R	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/924,535	Applicant(s) SHAFFER, CHARLES A.	
	Examiner Justin R Fischer	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16, 17 and 20 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 20 is/are allowed.
 6) ☒ Claim(s) 16 and 17 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staten (US 1,097,824, of record) in view of Ahmad (US 3,866,652, of record) and optionally in view of Rosenbaum (US 5,312,573, newly cited), Murray (US 5,238,734, of record), and Eswaran (US 5,711,904, of record). Staten and Ahmad are applied in the same manner as set forth in the Non-Final rejection mailed on March 9, 2004.

Staten teaches a tire construction in which the tire cavity is filled with a reinforcing assembly or filler formed of ground/comminuted rubber (as formed by a grinder) and a binder/adhesive material. In forming said filler, Staten includes the respective components in a mold and forms the filler into a shape corresponding to the mold. While this tire construction does not require a transfer of the filler directly into the tire cavity through a valve, one of ordinary skill in the art at the time of the invention would have found it obvious to directly transfer the filler material into the tire cavity versus forming a preform since it eliminates the complexities involved in molding operations. In particular, a direct transfer method eliminates the need to have a wide variety of differently sized molds since the transferred material simply fills up the volume of the tire cavity being filled as desired. Ahmad provides one example of such a direct

transfer method in which a binder/adhesive is mixed with particulate matter (e.g. glass or ceramic particles) and subsequently transferred through a valve (via a pump) into a tire cavity. Thus, at the time of the invention, the prior art recognized the ability to directly transfer particle reinforced filler assemblies into a tire cavity using the apparatus structure of the claimed invention. It is noted that the claimed apparatus structure results by adopting the direct transfer method of Ahmad in the tire construction of Staten.

As to the specific structure, Ahmad identifies the following steps: the adhesive/binder and the particulate matter are mixed or combined in a mixing pot (injector) and a pump transfers the mixed material through a suitable hose or conduit (input device) to a cut-off valve associated with the tire (Column 3, Lines 5-15 and Column 3, Lines 45-65). While not illustrated, the adhesive/binder is obviously supplied to the injector or mixing pot from a container or supply- this component is seen to constitute a mixer in that it injects or supplies the adhesive/binder to the particulate matter in the mixing pot or injector. Rosenbaum (Figure 1), Murray (Figure 1), and Eswaran (Figure 1) are optionally applied to expressly evidence the well known use of a supply means (or mixer) that supplies or injects the adhesive/binder into an injector. Additionally, Ahmad describes the filling of the tire with the filler material until rated pneumatic pressure for the tire is reached (pressure reading would be expected to be provided by pressure sensor).

Regarding claim 17, one of ordinary skill in the art at the time of the invention would have readily appreciated the inclusion of a control means to carry out the tire

filling process. It is well known that control means are commonly employed in a variety of processing methods in order to provide an efficient method. In particular, Ahmad describes the termination of the filling process once the rated pneumatic pressure is obtained and thus, one of ordinary skill in the art at the time of the invention would have readily appreciated a control means to interrelate the pressure sensor with the injector/filling means to provide an efficient method.

Allowable Subject Matter

3. Claim 20 is allowed. The following is an examiner's statement of reasons for allowance: As set forth in the previous paper, while Doan and Murray contain a similar system to that of the claimed invention (e.g. grinding device, elongated screw), the systems of the Doan and Murray do not constitute a tire cavity filling system and one of ordinary skill in the art at the time of the invention would not have found it obvious to use the systems of Doan and/or Murray in a tire cavity filling operation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

4. Applicant's arguments filed July 9, 2004 have been fully considered but they are not persuasive. First, the arguments regarding claim 20 are moot in view of the indicated allowability above. As to claims 16 and 17, applicant contends that each of the references (Staten and Ahmad) fail to teach certain portions of the claimed system.

Art Unit: 1733

However, as set forth in the rejection above, Staten teaches a tire in which a combination of ground rubber (core bits) and adhesive/binder are molded into a preform and subsequently arranged within the tire cavity. While Staten is completely silent as to additional processing techniques, Ahmad evidences the known use of a direct transfer method in which particulate matter and adhesive/binder are mixed in an injector (mixing pot) and subsequently pumped into a tire cavity. It is particularly noted that this method eliminates the need to use differently sized molds since the direct transfer method is applicable to all tire sizes (particulate reinforced elastomer simply fills volume of tire cavity)- this reduces the overall costs of the filling operation. One of ordinary skill in the art at the time of the invention would have found it obvious to incorporate the direct transfer technique of Ahmad in the tire filling method of Staten for the benefits noted above. As to the specifics of the system, Staten does in fact teach the use of ground or comminuted rubber (from a grinder) and Ahmad teaches an injector (supply means in which adhesive/binder is stored), a mixer (mixing pot), a pump, and an input device (hose or conduit). Thus, in modifying the system of Staten with Ahmad, one of ordinary skill in the art at the time of the invention would arrive at the claimed system.


Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


BLAINE COPENHEAVER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Justin Fischer". The signature is fluid and cursive, with the first name "Justin" and last name "Fischer" clearly distinguishable.

Justin Fischer

September 30, 2004